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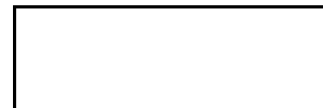
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PHOTOGRAPHIC INTELLIGENCE REPORT

VITAL INTERESTS AREA

EPICENTER STUDY
22 APRIL 1966 SEISMIC EVENT
NEAR AZGIR, USSR

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DATE JUNE 1966

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PAGES

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GROUP 1
Excluded from automatic
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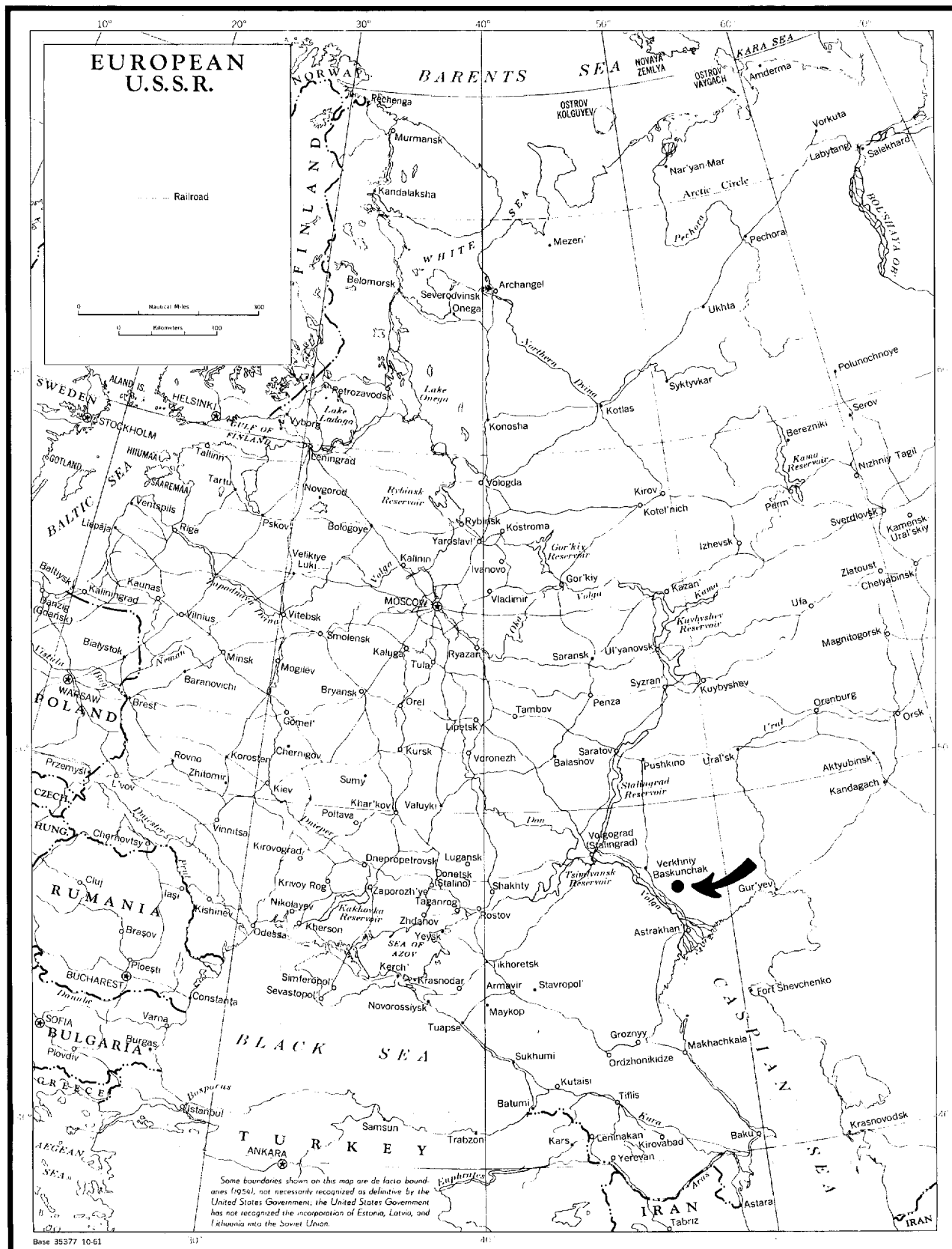
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FIGURE 1. LOCATION MAP, SEISMIC EVENT OF 22 APRIL 1966.



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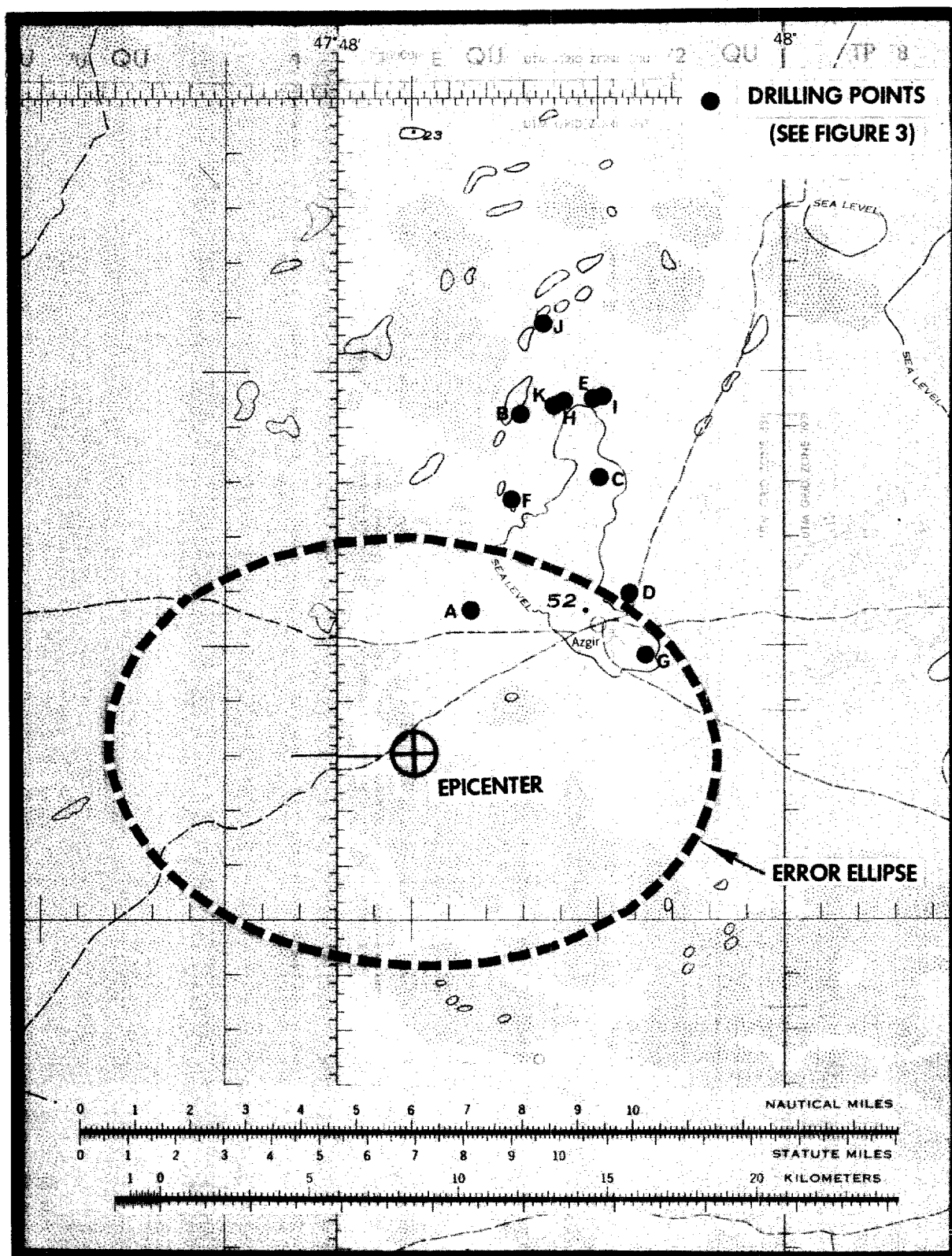


FIGURE 2. IMMEDIATE VICINITY OF THE 22 APRIL 1966 SEISMIC EVENT.

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EPICENTER STUDY
22 APRIL 1966 SEISMIC EVENT
NEAR AZGIR, USSR

INTRODUCTION

Seismic signals emanating from an aseismic area of the Soviet Union were detected on 22 April 1966 [REDACTED]

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[REDACTED] The epicenter of this event was 47-48N 47-50E, approximately 85 nautical miles (nm) north of Astrakan and 4 nm southwest of the village of Azgir (Figures 1 and 2). The degree of certainty as to the exact point of origin of the seismic signals is indicated by an error ellipse with a semimajor axis of 10 kilometers (km), inclined at an angle of 95° east of north, and a semiminor axis of 7 km (Figure 2).

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Pre- and post-event [REDACTED] photography was studied in an effort to identify any activity which could be associated with the seismic disturbance. Special emphasis was placed on the identification of activity which might suggest a nuclear or high explosives detonation as the origin of the signals.

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DISCUSSION

Post-event coverage of the epicentral area was obtained [REDACTED]

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[REDACTED] This photography was utilized in the post-event analysis of the area. The latest coverage prior to the event [REDACTED]

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[REDACTED] Interpretation of this photography was limited by scattered clouds, cloud shadow and poor image quality.

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However, the good quality, cloud-free photography [REDACTED]

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[REDACTED] was also utilized in the pre-event study of the area.

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The general area in which the seismic event occurred is a sparsely populated, semi-arid section of the Caspian Depression. Scattered live-stock farms and widely separated villages are the only forms of habitation in the area. Meager attempts at cultivation are in evidence near many of the farms.

The local geology of the epicentral area consists mainly of marine sediments of the upper and recent Quarternary periods. Of interest is the fact the village of Azgir is located atop an "open salt dome structure" overlain by pre-Pliocene sediments which outcrop at the surface. 2/ The terrain surrounding the epicenter is very level, with elevations at or near sea level (Figure 2).

Analysis of the above-mentioned photography has failed to provide evidence which would conclusively identify the source of the seismic signals.

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Surface indications of a possible earthquake or explosion such as earth disturbance, structural damage, cratering, etc., could not be identified in the vicinity of the epicenter.

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The only significant activity noted in the vicinity of the epicenter was a probable petroleum exploration project located in an area ranging from 3 to 8 nm NNE of the epicenter (Figures 2 and 3). [redacted] this activity consisted of 4 drill rigs, 4 abandoned drill holes, 3 probable abandoned drill holes and a support area (Figure 3). Abandoned drill hole A and the drill rig at point G fall within the error ellipse described in the introduction (Figure 2). Because of its possible significance, a detailed study of the drilling activity was conducted and is included in this report.

The Kordon SAM Training Facility, located 25 nm SSW of the epicenter is the only nearby military activity of significance. Analysis of pre- and post-event photography of this facility failed to provide evidence which might indicate an association with the seismic disturbance.

Drilling Activity

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First evidence of drilling in the Azgir area was visible on photography [redacted] At that time, drill rigs were located at the 3 points designated A, B and C (Figure 4). The drilling activity in this area can be negated on photography [redacted]

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The identification of this activity as probable petroleum exploration is based on drill hole spacing and location, local geology, and open-source literature published by the Soviets in 1960. 1-3/

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On post-event photography [redacted] drill rigs are visible at the points designated C*, F, G and H (Figures 3 and 5-8). Drilling points

* Drill rig/Derrick

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A, B, D and E have been abandoned. Points I, J and K, because of their similarity to the confirmed drilling points, are identified as probable abandoned drilling points. Drill rigs were not observed at these points on any of the photography.

The four drill rigs observed on this photography differ in size and design. A small, 60-foot-high drill rig/derrick without a walk-around is located at Point C (Figure 5). A [] rotary drill rig, with one walk-around, is located at Point F (Figure 6). This rig has a rectangularly shaped structure enclosing its base. A [] rotary rig, with one walk-around, is located at Point G (Figure 7). The largest rotary rig located at Point H [] (Figure 8).

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Only in the vicinity of Point G, however, is there any activity visible on the post-event photography. Several structures are located near the rig and in the general area. A crane with associated structures is located 800 feet ENE of the drilling point. A vehicle can be seen moving away from this area, heading toward the support area (Figure 7). An irregularly shaped ditch partially surrounds the rig at Point G. A straight trench leads away from the point in the general direction of the support area. A [] section of this trench appears to be open (Figure 7). The remainder of the trench is covered and very difficult to see. The terminus of the trench cannot be identified because of this.

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Support facilities for the drilling operation are located in an area just southwest of Azgir (Figure 9). Among the facilities in this area are 3 large warehouse-type buildings, 1 probable barracks building, at least 12 vehicles, open storage areas, a tent camp, and several other unidentified support buildings. Two of the vehicles appear to be small truck-mounted drill rigs or cranes. The tent camp, non-military in appearance, consists of 36 tents and 5 associated buildings. The tents were first observed on photography []

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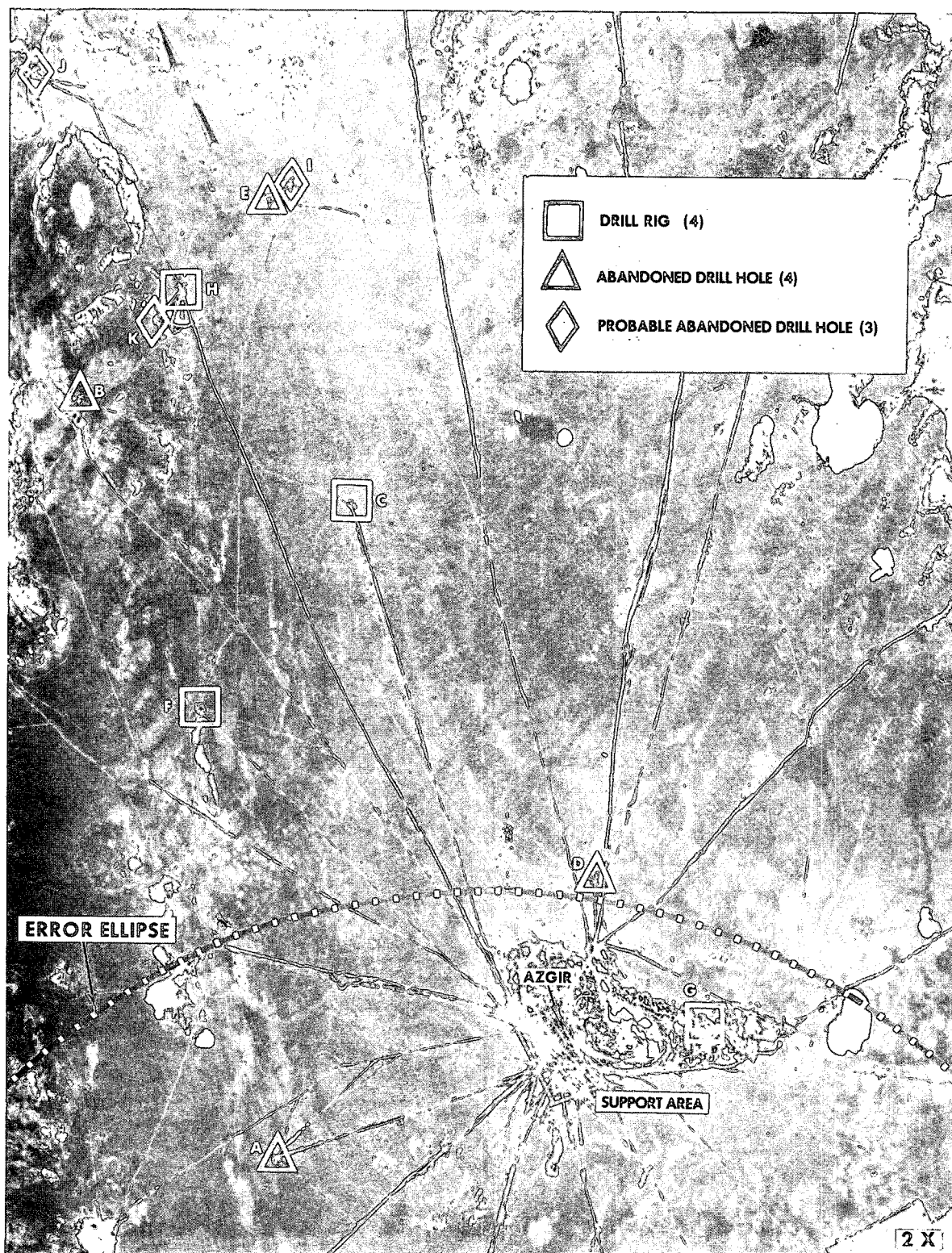


FIGURE 3. DRILLING ACTIVITY NEAR AZGIR, USSR.

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FIGURE 4. FIRST INDICATIONS OF DRILLING NEAR AZGIR, USSR.

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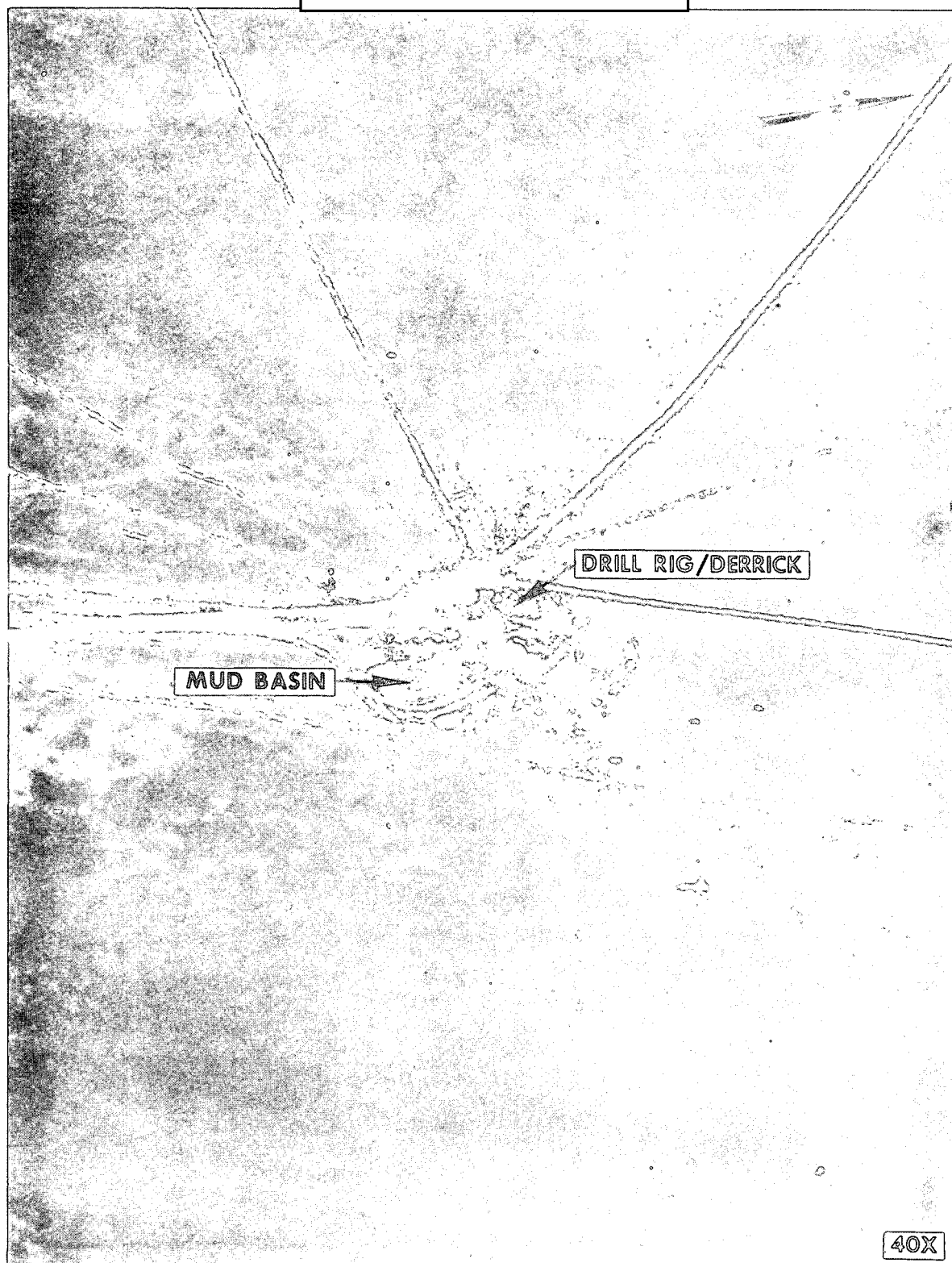


FIGURE 5. DRILL RIG/DERRICK AT POINT C.

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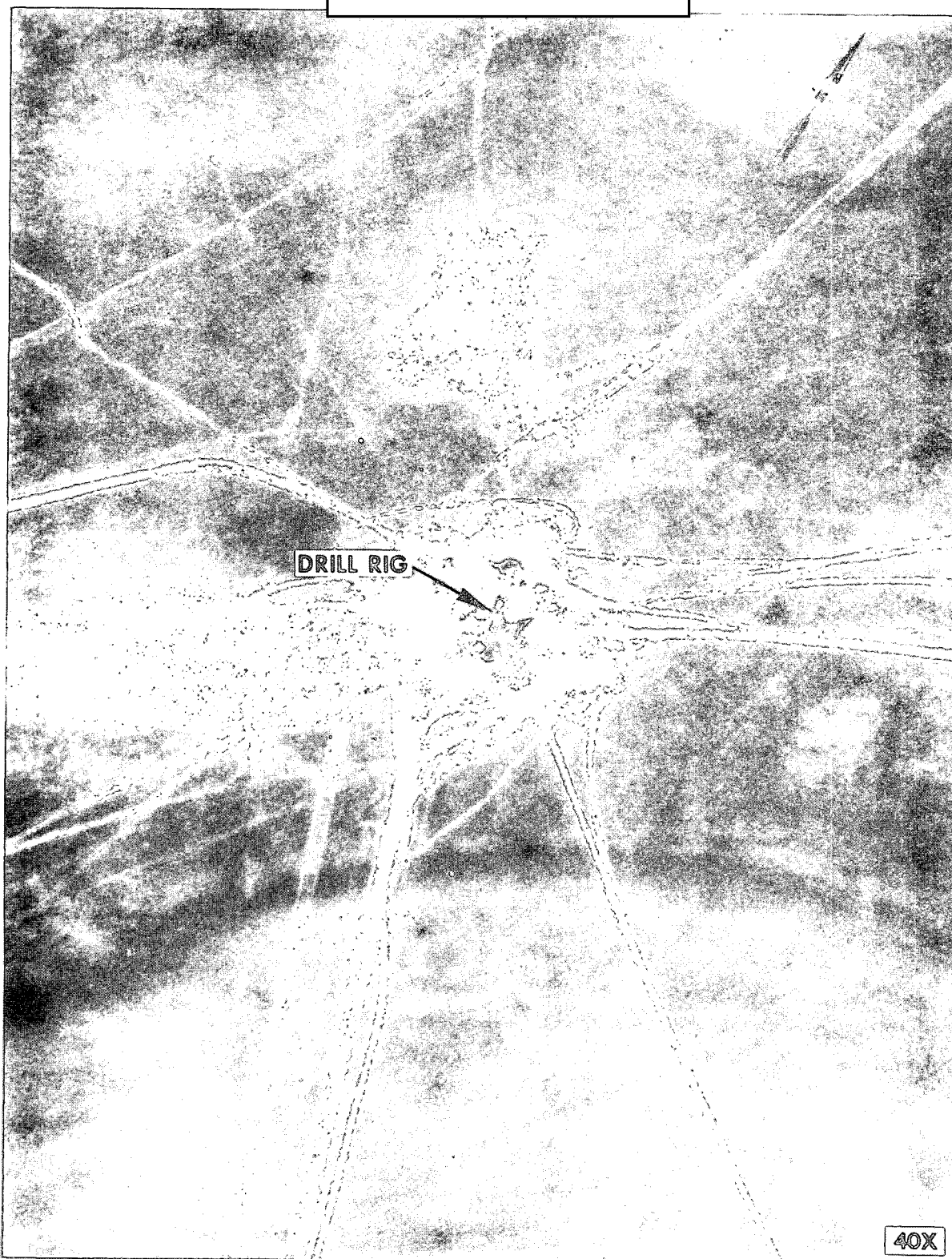


FIGURE 6. DRILL RIG AT POINT F.

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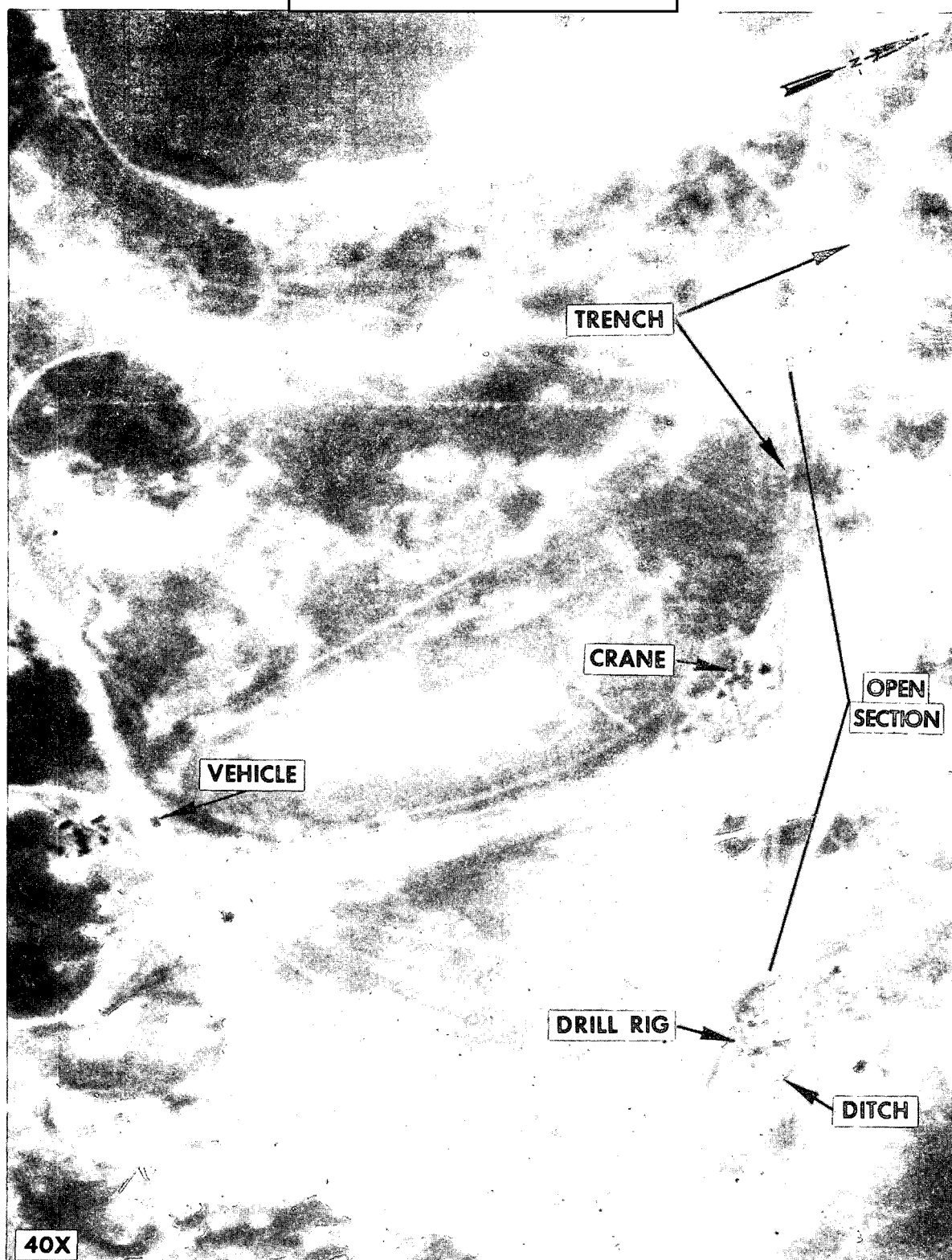


FIGURE 7. DRILL RIG AT POINT G.

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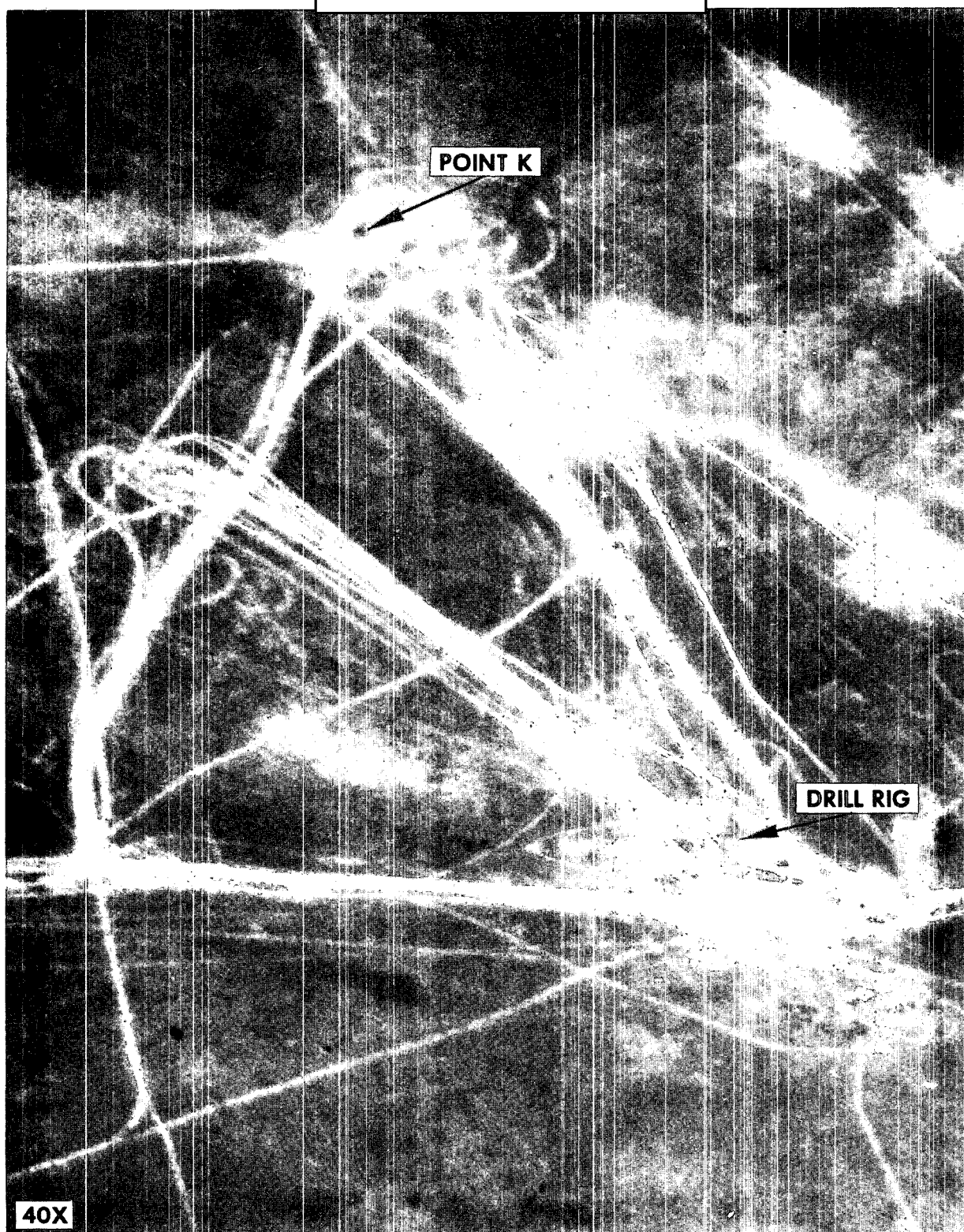


FIGURE 8. DRILL RIG AT POINT H.

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FIGURE 9. SUPPORT FACILITIES FOR THE DRILLING NEAR AZGIR, USSR.

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